GLOCHIDION PUBERUM (EUPHORBIACEAE) NATURALIZED IN SOUTHERN ALABAMA

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During the month of July 2000, a colony of about ten unusual, small trees was observed growing in a wooded area near Halls Mill Creek in Mobile, Alabama. They have subsequently been identified as *Glochidion puberum* (L.) Hutch., a member of Euphorbiaceae (Fig. 1). The largest tree was approximately 4.5 m tall with a diameter of nearly 7.5 cm at its base while the smallest was a seedling less than 5 dm tall. Simple, alternate, distichous leaves characterized these plants. Numerous, axillary clusters of small, yellowish flowers and young fruit were evident on the larger individuals. On subsequent visits to the site mature fruits were observed.

The Alabama occurrence appears to be the first known record of this species naturalized in the United States. Specimen data from Harvard University Herbaria (HUH) indicate that this taxon is widespread in southeastern China where its occurrence is documented by specimens for the following provinces: Anhui, Fujian, Guangdong, Guangxi, Guizhou, Hainan, Hong Kong, Hubei, Hunan, Jiangsu, Sichuan, Taiwan, Yunnan, Zhejiang (Anthony Brach, pers. comm.). This species is known to be cultivated in Florida. University of Florida Herbarium (FLAS) specimen data indicate its cultivation on the University of Florida campus in Gainesville, Alachua County. According to label data, a single tree reported near St. Augustine in St. Johns County, Florida was obtained from the University of Florida.

The source of this material in Alabama is unknown. To our knowledge, *G. puberum* is not cultivated in the region; area plant nursery personnel and state agriculture extension staff were not familiar with this species. No record of it for Alabama was found in the Freeman Herbarium, Auburn University. This plant has few attractive features and, therefore, is probably not sought for ornamental use. Certain species of *Glochidion* are available in the nursery trade in tropical regions of the world where they are used for hedge plantings and reforestation (Alstonville Tree Farm 2000). *Glochidion puberum* reportedly has many ethno-botanical medicinal uses in China in the treatment of abscess, amenorrhea, arteritis, snake bite, dysentery, enteritis, flu, laryngitis, malaria, sores, and trauma (Duke 1997). A Chinese name for the plant is "Suan p'an tzu"

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or "abacus plant" because the seeds resemble small abacus beads (Kam-biu Liu, pers. comm.).

The area in Alabama where the plant was discovered is beside a roadway through a degraded wetland on the south side of Halls Mill Creek. The *Glochidion* plants are growing aproximately five meters from the edge of the asphalt road and about two meters from the wetland itself. They are on better-drained soil about halfway up the roadside embankment, one meter above poorly drained, acidic, wetland soils and standing water. Overstory vegetation consists primarily of scattered *Pinus taeda* L. near the road and a few *Acer rubrum* L. near the creek itself. In close proximity to the *G. puberum* colony are other non-natives such as *Sapium sebiferum* (L.) Roxb., *Ligustrum sinense* Lour., and *Lonicera japonica* Thunb. Nearby native plants include *Cyrilla racemiflora* L. and *Myrica cerifera* L. The site is relatively shady due to the surrounding *Pinus* and relatively tall *Sapium*.

Glochidion puberum are large shrubs or trees. According to label data, one individual on the University of Florida campus was multi-trunked, 10 meters tall. Based on the material from Alabama the bark is brown with closely spaced fine longitudinal furrows; milky sap or exudate absent; twigs tan, densely pubescent; hairs uniseriate, spreading or tangled. Leaves simple, alternate, distichous, deciduous, 5–7 cm long, 2–3 cm wide, abaxially pubescent; blades narrowly elliptic, somewhat coriaceous; apex acute; bases rounded, asymmetric; margin entire; venation pinnate, secondary veins ca. 9 pairs, evenly spaced, prominent, arcuate, yellowish; petiole ca. 4 mm long, rusty-brown, densely pubescent; stipules laterally placed, free of one another, scale-like, acute 1–2 mm long. Inflorescences axillary, 10–20 flowers per cluster; pedicels ca. 2 mm long. Flowers at least some unisexual with staminate and pistillate flowers on the same plant, actinomorphic; ca. 5 mm in diameter; perianth consisting of 6 sepals, distinct, persistent in fruit; petals absent; stamens ca. 8; filaments joined, free of the perianth; ovary superior; carpels 4–5, bilocular; styles bi-lobed. Fruit capsular, pale green to yellow, ca. 14 mm in diameter. Seeds reddish-orange, ca. 4 mm long (Fig. 1).

Glochidion is mainly a tropical genus of more than 200 Asian, Australasian, and Polynesian species (Webster 1994). The native range of *G. puberum*, in China and its occurrence in the Gainesville, Florida area suggest that the taxon possesses some frost tolerance and may otherwise be pre-adapted to conditions in the southeastern U.S.

Voucher specimens: **ALABAMA: Mobile Co.**: naturalized in a wooded area near roadside on west side of Demetropolis Road immediately south of Halls Mill Creek Bridge, small tree approximately 7.5 cm in diameter at the base and 3.5–4 m tall growing with others, 30° 36.35' N, 88° 9.42' W; 12 Jul 2000, *Fearn s.n.* (LSU). Additional specimens have been distributed to AUA, DAV, HUH, and L.

FIG. 1. Branch of *Glochidion puberum* showing twig, leaf, and floral features. Insets show nearly mature fruit and seed.

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